

REMARKS / DISCUSSION OF ISSUES

Claims 1-5, 7, and 10-23 are pending in the application. Claims 6, 8, and 9 are canceled herein, and claims 10-23 are newly added.

The Office action of 28 June 2005 rejects:

claims 1-5 under 35 U.S.C. 103(a) over Ishihara (EP0588019) and Bae et al. (USP 5,247,194, hereinafter Bae); and

claim 7 under 35 U.S.C. 103(a) over Ishihara, Bae, and Bonnett et al. (USP 6,075,506, hereinafter Bonnett).

The applicants respectfully traverse these rejections.

Claim 1, upon which claims 2-5 and 7 depend, claims a display device that includes a pulsed backlight system that applies a pulse of light at a select time after a sequence of selecting pixels; wherein the switching rate of pixels is increased based on the sequence of selecting the pixels, so as to minimize a variance between the select time of applying the pulse of light and times that the pixels complete their switching.

Neither Ishihara, Bae, nor Bonnett, teach a display device that includes a pulsed backlight system, wherein the display device is configured to increase the switching rate of pixels in the sequence of selecting the pixels so as to minimize a variance between the select time of applying the pulse of light and times that the pixels complete their switching.

The Office action relies upon Ishihara for teaching a pulsed backlight. The applicants respectfully disagree. Ishihara teaches a backlighted display device, but does not teach that the backlight is a pulsed backlight system as specifically claimed by the applicants. The Office action references page 6, lines 1-3 of Ishihara for teaching a pulsed backlight system. The cited text follows:

"As shown in Fig. 3, the liquid crystal display includes a backlight 21, an inverter 22, a transformer 23, a fan 24, a power source 25 for the backlight, a diffuser 26, the liquid crystal panel 27 and a driving circuit 28. The backlight 21, the inverter 22, the transformer 23, the fan 24, etc. are disposed so as to assemble a module..." (Ishihara, page 6, lines 1-4).

As can be seen in the above cited text, Ishihara teaches a backlight 21, but does not teach a pulsed backlight 21, as specifically claimed.

As the Examiner notes in the Advisory Action of 23 August 2005, Ishihara teaches a "uniform intensity of transmitted light", which is contrary to a pulse of light, as specifically claimed.

The Advisory Action also references Ishihara's FIG. 4, which illustrates the transmittance of a pixel as a function of the voltage applied to the pixel, and Ishihara's comments at page 6, lines 8-11 regarding the contrasts of the upper and lower area pixels. The applicants note, however, that Ishihara's contrast measures are based on whether an individual pixel is transparent (transmittance at or near 1) or opaque (transmittance at or near 0), and is unrelated to whether the backlight is pulsed or constant/uniform. In like manner, a measure of the brightness of a display is also unrelated to whether the backlight is pulsed or constant, because the pulsing of the backlight should not be apparent to the viewer.

Because the prior art fails to teach a display device that is configured to increase the switching rate of pixels in the sequence of selecting the pixels so as to minimize a variance between the select time of applying the pulse of light and times that the pixels complete their switching, as specifically claimed in claim 1, the applicants respectfully maintain that claims 1-5 and 7 are patentable under 35 U.S.C. 103(a) over Ishihara and Bae, or Ishihara, Bae, and Bonnett.

In the interest of advancing prosecution in this case, the following remarks are provided regarding newly added claim 10, upon which claims 11-23 depend, relative to Ishihara, Bae, and Bonnett.

Claim 10 specifically claims a display device that is configured such that a switching rate of each row of pixels is based on a difference between the time of providing a pulse of light and the time of selecting the row of pixels.

Neither Ishihara, nor Bae, nor Bonnett, teach a switching rate of each row of pixels that is based on a difference between the time of providing a pulse of light and the time of selecting the row of pixels.

In view of the foregoing, the applicants respectfully request that the Examiner withdraw the objection(s) and/or rejection(s) of record, allow all the pending claims, and find the application in condition for allowance. If any points remain in issue that may best be resolved through a personal or telephonic interview, the Examiner is respectfully requested to contact the undersigned at the telephone number listed below.

Respectfully submitted,



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